

Safety Checklist for the Review of Design Projects	
Item	Checked
DESIGN STANDARDS	
Has the proper functional classification of the roadway been selected?	
Has the proper design speed been selected for this roadway?	
Accident reports reviewed to determine problem areas or accident patterns?	
GEOMETRIC DESIGN	
Horizontal Alignment	
Are any of the horizontal curves below the minimum radius for the design speed?	
Are the superelevation rates correct when compared with the horizontal curves in the design?	
Are the superelevation transitions sufficient? Tangent runout?	
Are transitions located properly? 1/3 – 2/3 rule? 50/50?	
Are broken back curves used in the horizontal alignment?	
Are compound curves accounted for in superelevation applications?	
For PCC curves does the ratio between curves exceed 1.5? 2.0?	
Is roadway widening required due to horizontal curvature?	
Does horizontal curvature cause sight distance problems due to vegetation or other obstacles along the roadway?	
Vertical Alignment	
Any long grades less than 0.5%? Excessive flat grades?	
Are maximum grades exceeded?	
Stopping sight distance problems? K values followed?	
Any side roadways/driveways affected by sight distance? Turning vehicles hidden by grades and vertical curves?	
Any problems with vertical clearance? Underpass? Utility lines?	
Cross-section	
Proper travel way width selected based on functional class, ADT, and design speed?	
Proper shoulder width selected based on functional class, ADT and design speed?	
Is ditch design traversable?	
CLEAR ZONE AND BARRIERS	
Is roadway clear zone free of obstacles?	
If present, can roadway obstacles within the roadway clear zone be moved?	
Do barriers meet NCHRP 350?	
Do crash cushions or terminals meet NCHRP 350?	
Do transitions meet NCHRP 350?	
Do bridge rails meet NCHRP 350?	

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Do accident records show areas where vehicles may be leaving the roadway?	
Are there any blunt ends for oncoming traffic? Bridge parapets? Culvert endwalls?	
Barriers do deflect. Is there any problem associated with barrier deflection?	
Is there proper recovery area? Does the earthwork provide for barrier, barrier terminals?	
Is opposing traffic accounted for if the opposing traffic clear zone extends to opposing barrier?	
PERMANENT TRAFFIC CONTROL	
Signing	
Are the signs being used per the new MUTCD?	
Do the sign messages convey the intended actions that are required to be taken?	
Do the signs have the proper legends, sizes, color combinations and reflectivity?	
Is the location of the sign per the MUTCD? Are the signs properly spaced? Are the layout measurements tied to a physical feature so the Contractor can do the layout in the field? Is there proper sight distance to the sign?	
Is it physically possible to place the sign where indicated? Is there sufficient horizontal clearance?	
Any existing signing that needs to be replaced to be in accordance with the MUTCD? Any conflicting existing signing?	
Markings	
Have passing zones been verified? Matching existing?	
Handicap parking meet ADA requirements?	
Striping requirements per the new MUTCD? Meets Centerline warrants? Meets edgeline warrants?	
TEMPORARY TRAFFIC CONTROL	
General	
Is the project construct-able using the construction Traffic Control Plan (TCP) as shown in the PS&E? Does the traffic control affect the design, such as material requirements from roadways used for public use during the construction? Traffic restrictions?	
Is there enough work area and staging areas for the Contractor to do the necessary construction operations? Does the construction traffic control allow for Contractor access?	

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What is the design speed of the construction traffic control? Is the speed based on the existing posted speed? If not, why?	
Is the work site safe for both traffic and workers?	
Construction Signing	
Are the signs being used per the MUTCD? If the situation calls for a standard traffic control scheme, do the advance warning signs match those shown in the standard layouts in the MUTCD?	
Do the sign messages convey the intended actions that are required to be taken?	
Do the signs have the proper legends, sizes, color combinations and reflectivity? The MUTCD provides that the minimum letter size for signs should not be less than 5-inches for low volume traffic.	
Is the location of the sign per the MUTCD? Are the signs properly spaced? Are the layout measurements tied to a physical feature so the Contractor can do the layout in the field?	
Are there existing signs within the construction zone that may conflict with the Traffic Control Plan? Do any of the existing signs obscure the view of advance warning signs?	
If stage construction is used, is the signing from stage to stage consistent (sign types and locations)? If not, could it be made more consistent?	
Is a detour provided? If a numbered route, are the numbered routes used for the detour? Are all access points properly signed? If a detour is not provided could a detour work?	
Is it physically possible to place the sign where indicated? Is there sufficient horizontal clearance?	
Is there a need for any pedestrian or bicycle signing?	
Channelizing Devices	
Are the correct devices used for a particular operation? <ul style="list-style-type: none"> • Drums should be used instead of barricades, type II. • Temporary concrete barriers should not be used as a channelizing device. 	
Are channelizing tapers located correctly? Are they the correct length? Are devices spaced correctly in the taper? Are they spaced correctly in the work area?	
Do the devices meet MUTCD requirements for size, type, color, reflectivity?	
Are the devices properly ballasted (weighted down)?	
Pavement Markings	
Do existing pavement markings conflict with the proposed temporary markings?	

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Are short-term markings required? If so, do they coincide with MUTCD 6D and Federal Lands Highway policy?	
Is marking consistent, especially during stage construction?	
Lighting Devices	
<p>Are warning lights used correctly?</p> <ul style="list-style-type: none"> Warning lights, type A should be used on drums or barricades to mark point hazards, or on the first 2 devices in a taper. Warning lights, type B, if used, should be used on signs and the batteries should be placed no higher than 12-inches off the ground. Warning lights, type C should be used on drums or barricades used in a series for delineation, except as provided above. 	
<p>Are arrow panels placed on the shoulder adjacent to the beginning of the taper? If there is limited shoulder, the arrow board should be placed in the closed lane towards the beginning of the taper.</p> <p>Is there adequate sight distance for the arrow board?</p>	
<p>Is the arrow panel being used correctly?</p> <ul style="list-style-type: none"> Arrow panels should not be used in "passing arrow" mode on two-lane two-way roadways, shoulder closures, or lanes shifts. For the cases listed above the arrow board can be used in the "caution" mode. 	
Barriers	
Are untreated temporary barrier ends exposed to traffic?	
Is the area between the barrier and the travel lanes relatively flat (approximately 10:1)?	
<p>Are temporary barriers required due to drop-off close to the travel lanes?</p> <p>Are existing barriers being removed such that the hazards they were protecting are now a hazard during the construction?</p>	
Is temporary barrier properly accounted for? For stage construction use the greatest amount of barrier required for a particular stage as the barrier quantity, and remember to account for storing barrier during stages with less than the greatest amount for moving barrier.	
Are construction areas properly shielded?	
Temporary barriers do deflect. Is there any problem associated with this possible deflection? Should the barrier be bolted to the pavement or bridge deck?	
Is it physically possible to place barriers as shown in the TCP? If used on a bridge deck removal is barrier placed on a cantilever that may fail? Do the barrier flares shown in the TCP make the barrier have to be placed down a	

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